

FUNCTIONS OF THE BRIDGE DESIGN SECTION

The primary function of the Bridge Design Section is to provide the necessary program management, project management, engineering and plan preparation expertise for various types of fixed and movable bridges. This may include project types for new bridge construction, bridge replacement, bridge rehabilitation and bridge repairs. The Section is responsible for the program management of the bridge on-system preservation program, off-system preservation program and the interstate lighting program. The Section is organized with Administrative, Structural Design, Bridge Rating, Electrical and Mechanical gangs as per Figure 1.1. Some of the other functions of the Bridge Design Section are as follows:

1. To provide project managers and task managers for the various DOTD Project Delivery Stages.
2. To provide the design and plan preparation for bridge repairs and other bridge maintenance projects.
3. To provide the electrical, mechanical and architectural design and plan preparation for movable bridges, roadway lighting, communication systems, microwave towers, rest areas, weigh stations and buildings. Provide program management for the interstate lighting program.
4. To maintain standard plans, special details, specifications and EDSM's for bridges, highway safety hardware (guardrail, barriers, attenuators, workzone, etc.) and permanent highway signing.
5. To provide the design, plan preparation or plan review for highway safety projects involving guardrail, attenuators, bridge and roadway barriers and highway signing.
6. To evaluate and monitor 8,000 bridges on the state system in order to perform structural ratings and load postings, review overweight vehicle permits. Evaluate sudden structural conditions changes caused by natural forces, accidents or planned structural modifications and repairs. Load rate new structures in compliance with Title 23 of the US Code.
7. To provide project management, engineering review, and administer funding for structural, mechanical or electrical design projects prepared by consulting engineering firms under contract with the Department.
8. To provide technical engineering assistance, coordination and general information to other Department sections, state and federal agencies, legislative bodies and the general public.
9. To participate as leaders and members in various Department, AASHTO and other National technical committees addressing, design, construction, maintenance and safety issues of fixed and moveable bridges. To annually review the AASHTO LRFD Bridge Design Specifications and AASHTO Manual For Bridge Evaluation and make recommendations for their updates.

10. To provide ideas for applicable research and provide technical engineering support for research projects conducted by the Department through the Louisiana Transportation Research Center (LTRC).
11. To provide Bridge Maintenance recommendations and assistance to planned modifications and additions to existing structures affecting temporary and permanently the load carrying capacity of the affected bridges.
12. To provide the Department with Cost Analysis for all stages of bridge development including planning, design, construction and operations. To provide annual cost reports on the Federal Bridge Program for the Federal Highway Administration.
13. To provide review of Bridge Construction Activities undertaken the work stamped and seal or directed by our staff. To provide review to RFIs, change order, fabrication, demolition and erection drawings for bridge, electrical or mechanical projects.
14. To maintain and update the DOTD Bridge Design and Evaluation manual and to issue technical memorandums when needed.

FIGURE 1.1 - BRIDGE DESIGN ORGANIZATION CHART

